

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
13 May 2004 (13.05.2004)

PCT

(10) International Publication Number
WO 2004/039527 A3

(51) International Patent Classification⁷: B23K 9/235,
15/00, 20/12, C22F 1/04

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(21) International Application Number:

PCT/GB2003/004646

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(22) International Filing Date: 28 October 2003 (28.10.2003)

(25) Filing Language: English

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(26) Publication Language: English

(30) Priority Data:
0225518.0 1 November 2002 (01.11.2002) GB

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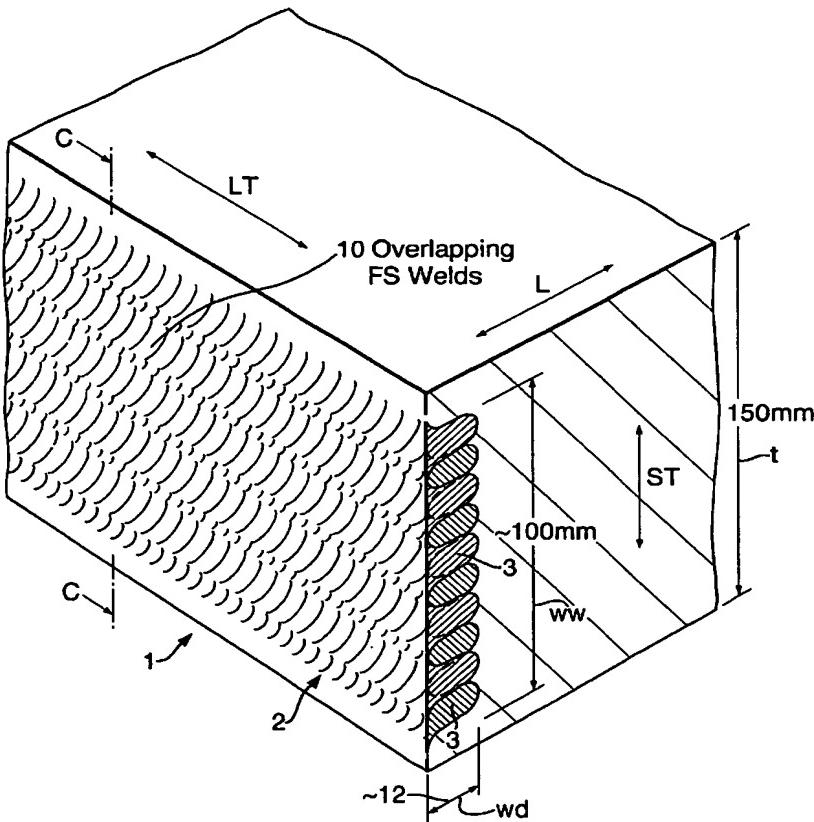
(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),

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[Continued on next page]

(54) Title: WELDING METHOD



(57) Abstract: Two aluminium alloy work-pieces are welded together. Firstly, a portion (2) of each work-piece (1) is prepared, the preparation including the performance of a surface treatment, such as friction stir welding, that results in a region (3) extending from the exterior surface into the work-piece having a grain structure that is finer than the grain structure of the work-piece outside that region. Then the work-pieces are welded together by means of a fusion welding process, such as electron beam welding, that joins the respective prepared portions (2) of the two work-pieces (1). The preparation of the work-pieces is so performed that said region (3) extends into the work-piece to a depth that exceeds the depth of material that is caused to melt during the fusion welding process.

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Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(88) Date of publication of the international search report:
17 June 2004

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Published:

- *with international search report*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

INTERNATIONAL SEARCH REPORT

Int'l Application No
PCT/GB 03/04646

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 B23K9/235 B23K15/00 B23K20/12 C22F1/04

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
 IPC 7 B23K C22F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

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Patent family members are listed in annex.

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Date of the actual completion of the international search

24 March 2004

Date of mailing of the international search report

16/04/2004

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INTERNATIONAL SEARCH REPORT

Int'l Application No
PCT/GB 03/04646

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